



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,471	12/14/2001	Ching-Hsing Huang	3313-0443P-SP	1066

2292 7590 02/06/2003

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

SMITH, JULIE KNECHT

ART UNIT	PAPER NUMBER
----------	--------------

3682

DATE MAILED: 02/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/014,471

Applicant(s)

HUANG ET AL.

Examiner

Julie K Smith

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 8-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7, drawn to a hydrodynamic and hydrostatic hybrid bearing, classified in class 384, subclass 100.
 - II. Claims 8-18, drawn to a bearing manufacturing method, classified in class 29, subclass 898.09.

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the bearing could be made by a materially different process, using a different order of manufacturing than what is claimed by Applicant.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Joe Muncy on 27 January 2003 a provisional election was made with traverse to prosecute the invention of group I, claims 1-7. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-18 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 3682

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

2. The disclosure is objected to because of the following informalities: The specification contains many misspellings and typographical errors.

Appropriate correction is required.

Claim Objections

3. Claims 2-7 are objected to because of the following informalities:

Regarding claims 1-7, the claims use the recitation "as claim (1,3,4)". The phrase should be written "of claim (1,3,4)".

Regarding claim 3, line 2 appears to have some words missing or phrased improperly.

Regarding claim 7, line 2 incorrectly uses the verb "is". The proper verb used should be "are".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 3 and 4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Applicant claims that the bearing housing is pre-pressurized, however, gives no description as to how the pre-pressure is applied.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

7. Claims 1, 3-4 and 6-7 rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. (6,071,014). Lee et al. discloses a hydrodynamic and hydrostatic hybrid bearing (see fig. 9) comprising a sealed housing (162e) containing a lubricant, a cylinder-shaped bushing (166e) placed in the housing having a plurality of dynamic pressure generating herringbone grooves (170a, 172a) being penetrated for storing the lubricant, and a shaft (122e) rotatably installed in the bushing, wherein the lubricant produces hydrodynamic pressure between the grooves and the shaft, when the shaft rotates relative to the bushing.

Regarding claim 3, product-by-process claims are limited by and defined by the process; determination of patentability is based on the product itself. The patentability of a product does

Art Unit: 3682

not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. as applied to claims 1,3-4 and 6-7 above, and further in view of Mori et al. (6,023,114).

Regarding claim 2, Lee et al. discloses a hybrid bearing as claimed, but is silent as to the housing comprising a porous material for storing lubricant. However, Mori et al. teaches a housing for a bearing having a porous material for storing lubricant.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the housing of Lee et al. with the teachings of Mori et al. to have a porous housing so as to more evenly distribute the lubricant over the length of the bushing and shaft.

Regarding claim 5, Lee et al. discloses a hybrid bearing with a sealed housing, but does not disclose the housing sealed with glue. However, Mori et al. teaches a housing containing a lubricant with a seal made from a synthetic resin.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the seal of Lee et al. with the teachings of Mori et al. to be made from a glue as it is old and well known in the art to use glue as a sealant.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

3,759,588 to Anderson	4,597,676 to Vohr et al.
4,671,677 to Heshmat et al.	5,545,014 to Sundberg et al.
4,834,559 to Kaldova	6,241,392 to Desai et al.
5,871,285 to Wasson	3,841,720 to Kovach et al.
5,503,478 to Blaine	5,397,184 to Murai
5,415,476 to Onishi	2,249,843 to Marsland
5,466,071 to Slocum	4,460,284 to Lauterbach et al.
4,927,274 to Smith	5,000,584 to Simmons
6,250,807 to Mori et al.	6,086,257 to Lee
5,516,212 to Titcomb	

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie K Smith whose telephone number is 703-305-3948. The examiner can normally be reached on Monday-Friday, 8-5:30, (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on 703-308-3668. The fax phone numbers for the

Art Unit: 3682


organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

JKS

jks

January 30, 2003


DAVID A. BUCCO 2/4/03
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600